Developing Nine-Element Nonpoint Source Implementation Strategic Plans in Ohio

Ohio Stormwater Association Workshop

September 30, 2020

Rick Wilson, Ohio EPA – Surface Water

Greg Nageotte, ODA – Soil and Water Conservation

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Agenda

- Introduction and background to the NPS-IS program
- Guidance Update – What's New?
- Frequently Asked Questions and Pro Tips
- Tools and Resources

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What is a NPS-IS?

- **N**on**p**oint **S**ource **I**mplementation **S**trategy “Nip-sis”
- Ohio 9-Key-Element planning framework
- Watershed-based – “Watershed Assessment Units” – HUC-12
- Science-based – data, goals, objectives, critical areas
- Project-focused – details
- Local – stakeholder involvement
- State endorsed based on U.S. EPA guidance
- Grant program requirement – 319 grants; GLRI sub-awards

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U.S. EPA "9-Key-Elements"

- 2003 - U.S. EPA first referenced essential planning elements
- Refined over time with increasing emphasis on ***critical areas***
- 2013 U.S. EPA guidance: States must utilize 319 funds only ***for projects*** which include "Nine Essential Elements."
- See U.S. EPA Handbook for Developing Watershed Plans to Restore and Protect Our Waters. (U.S. EPA, 2008)

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U.S. EPA "9-Key-Elements"

a. Causes and sources of pollution
b. NPS management measures
c. Water quality-based goals
d. Technical and financial assistance
e. Information and education
f. Schedule
f. Milestones
h. Criteria
i. Monitoring

Ohio NPS-IS framework ensures all are included

Framework approved by U.S. EPA - 2016

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NPS-IS Guidance Development

- Watershed Action Plan development guide (2001)
  - WAPs endorsed 2004 – 2015
- Improved alignment with U.S. EPA 9-key-elements
  - Elements applied to detailed projects & refined critical areas
- Ohio EPA, ODA and consultation with experienced watershed planners
- In use since 2016
- First NPS-IS approved in 2017

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NPS-IS Guidance Development

NPS-IS Guidance Update

- Underway since early 2020
- Consultation with experienced NPS-IS developers
  - Soil and Water Conservation Districts
  - Private Consultants
  - Watershed groups
- Goal: published by the end of 2020

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NPS-IS Components

Goals

- Based on **Causes** of nonpoint source pollution – characteristics that lead to non-attainment of water quality standards - measured parameter
- Numeric water quality target
  - Near Field - Based on water quality standards – bioindicators (ICI, IBI) and habitat quality (QHEI); N & P loads
  - Far Field – Lake Erie phosphorus load reduction targets distributed to HUC-12s

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NPS-IS Components

Objectives

- Address **Sources** of nonpoint source pollution – land use
  - Technical solutions – best management practices - measures
  - Numeric implementation target – acres, feet, number of structures, etc.
    - Aspirational – what can be implemented in 10 years?

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NPS-IS Components

Critical Areas

- Geographic focus area for categories of Objectives
  - Stream restoration and riparian practices
    - stream sections and corridor, specific sites for dam removal or severe stream erosion.
  - Agricultural row crop practices –
    - prioritized agricultural lands… proximity to streams, soil testing, highly erodible land, etc.
  - Urban, suburban, shoreline, infrastructure, home sewage treatment
    - cluster areas based on features and water quality goals.
  - Wetlands –
    - combination of above – strategically placed for water quality goals.

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NPS-IS Components

Critical Areas

- Not merely arbitrary or political subdivisions of the watershed
- May be expanded or changed over time
- May overlap or extend from adjacent NPS-IS
- A single high-value project may have its own critical area
- See U.S. EPA publication, *Critical Source Areas Identification and BMP Selection: Supplement to Watershed Planning Handbook*
  - Link on Ohio EPA NPS-IS Web page

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NPS-IS Components

Projects

- Most 9-key-elements are satisfied with Project Summary Sheets
  - Short-term (1-3 years) "Shovel-ready" **Project Summary Sheet required**
  - Medium term (3-7 years); Long-term (7+) No Project Summary Sheet
- Serve as grant pre-proposals
- Implementation details:
  - Site-based project
  - Cost-share incentive project

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What's New?

- Step-by-step approach
- More Frequently Asked Questions
- More Examples
- Far Field Load Reduction Goals
- More on Critical Area Development
- More tools and resources
- More on stakeholder involvement

Rick will share more on these

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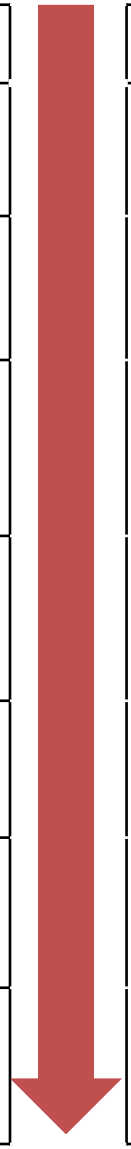
Step-by-Step Approach

NPS-IS Outline Order
Watershed profile
Public participation
Water quality characterization
Critical Areas
Goals
Objectives
Projects



NPS-IS Development Order		
Public participation (iterative consultation with stakeholders at each stage of NPS-IS development to ensure buy-in and willingness to implement)	Projects (ID and detail projects)	Water quality characterization (ID land use related water quality issues)
		Goals (ID and quantify WQ problems and reduction targets)
		Objectives (ID and quantify practices)
		Critical Areas (Delineate specific geographic target areas for sets of closely related objectives)
		Watershed profile

DIY or Contracting

- No such thing as completely doing it yourself
  - Need partners and stakeholder involvement
- Contractors produce professional documents
  - Process management, GIS/maps, data, literature review
  - $5,000 to $12,500 per
- Local entities, e.g. SWCDs
  - engaging stakeholders, outreach, objectives and project development
- 3 to 6 month

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Review Process

- Keep Greg and Rick informed throughout the process
- Email a Word version draft to Rick for review
- Rick and Greg review and return with comments using “track changes”
  - We avoid adding comments in subsequent reviews.
- Email subsequent drafts
  - Reference changes in response to review comments
- Rick communicates approval and posts on Ohio EPA web

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Developing Nine-Element Nonpoint Source Implementation Strategic Plans (NPS-IS) in Ohio

Presented by the Ohio Stormwater Association, Ohio Department of Agriculture, Division of Soil and Water Conservation and the Ohio EPA

Frequently Asked Questions, Pro Tips, and
Tools and Resources

September 30, 2020

Rick Wilson, Ohio EPA rick.Wilson@epa.ohio.gov

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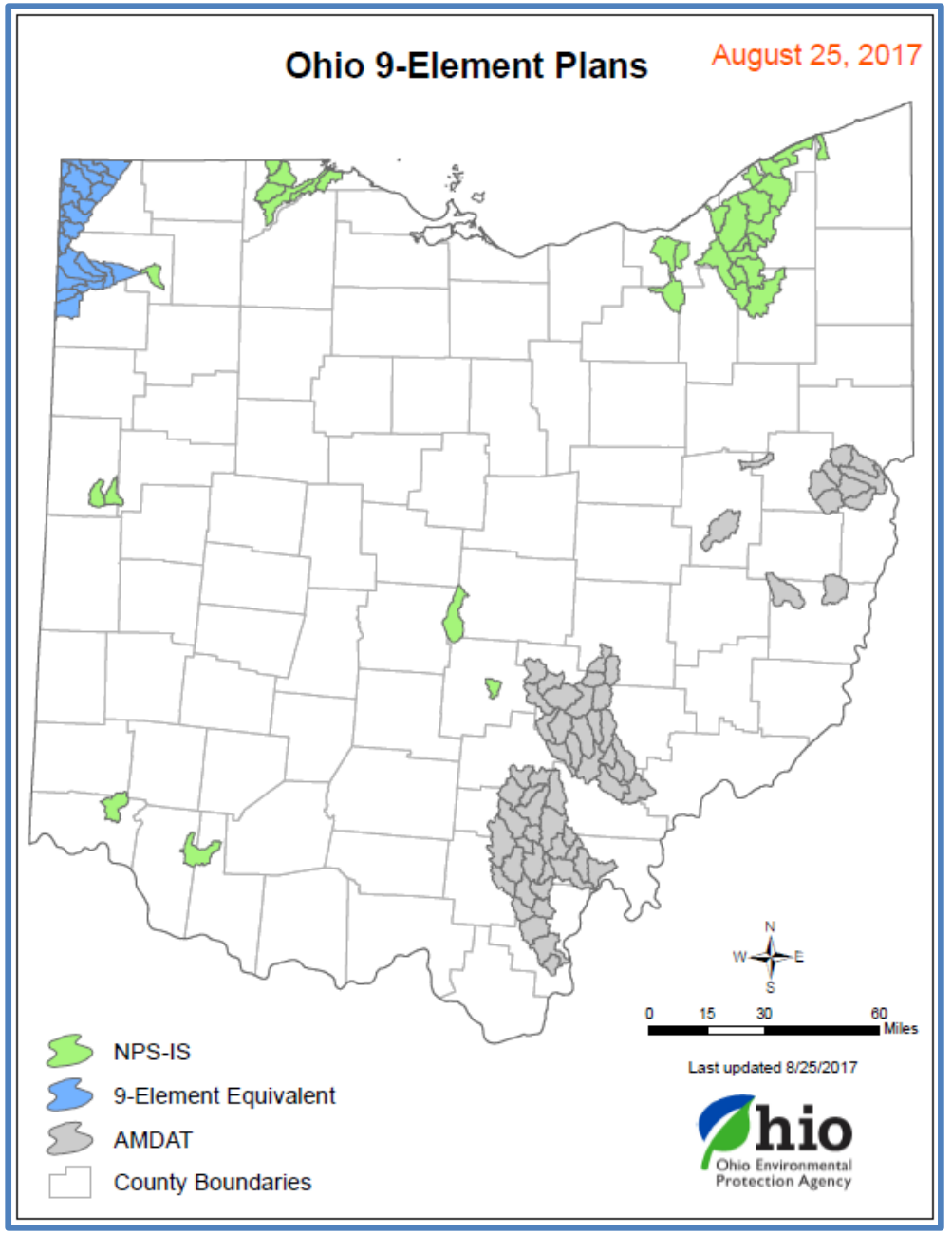
9-Element Watersheds

31 NPS-IS
25 Equivalent
62 AMDAT

There are 1538
HUC-12
Watersheds in Ohio



August 2017

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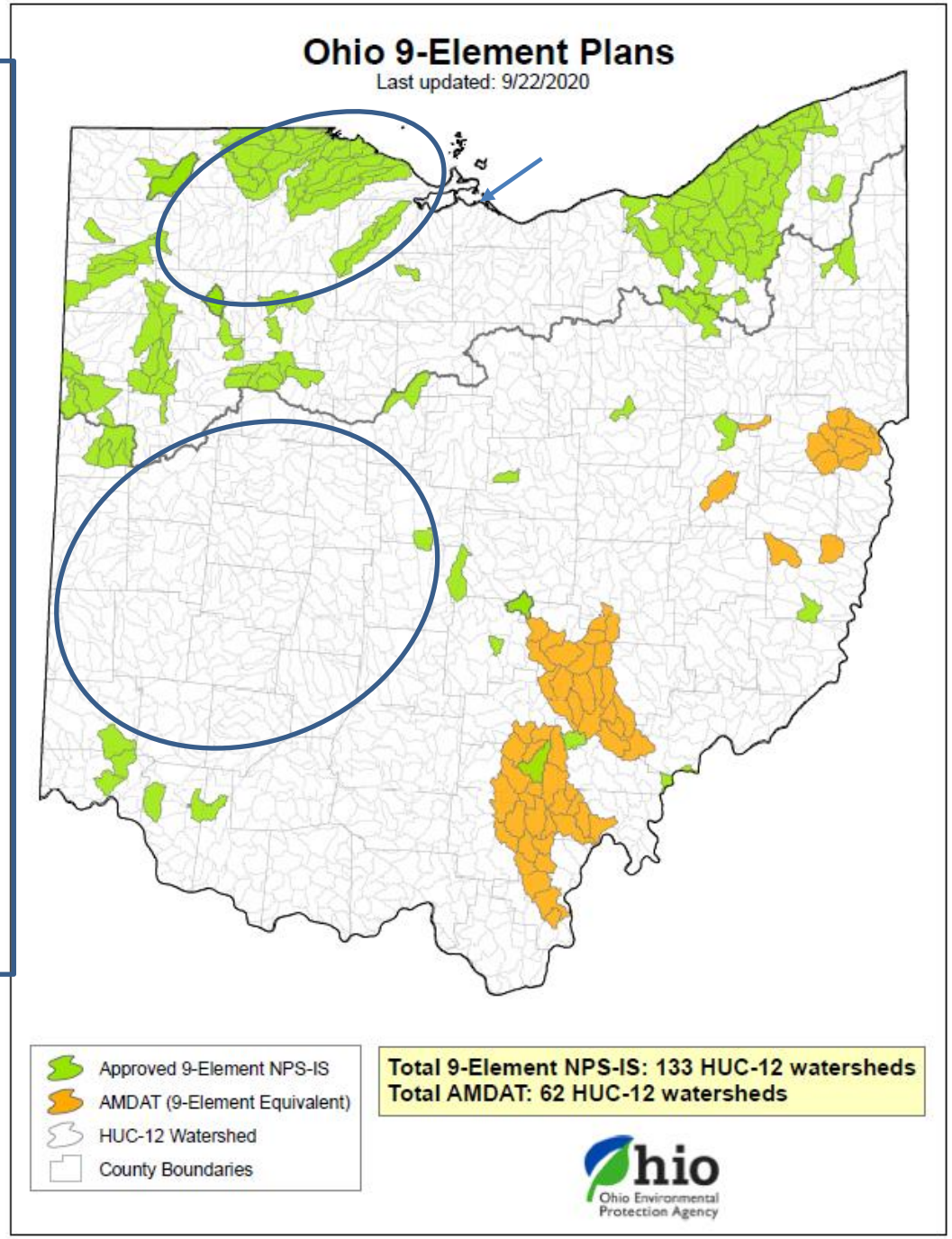
- New effort to develop NPS-ISs in priority watersheds (ag heavy) Ohio River Basin. Will get us about 20 more NPS-ISs in ORB. NPS-IS development funded through award from U.S. EPA Gulf Hypoxia Task Force
- Far-field Phosphorus reduction targets needed in next updates to Maumee R./Toledo area NPS-ISs.
- Many more NPS-ISs expected in WLEB.
- Approximately 40 or more new NPS-ISs are slated for or already under development.



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Frequently Asked Questions

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https://epa.ohio.gov/dsw/nps/index

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Step-by-Step Approach

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		Watershed profile

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Frequently Asked Questions

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Stakeholder Involvement

- My organization assigned me to do a 9 Element plan, now what?!
  - Identify stakeholders: (e.g., City, County, SWCD, Watershed Organizations, Parks, Farming Interests, NRCS, ODA, Extension, Health Department).
  - Create a venue (virtual or otherwise) to go over main components of NPS-IS with focus on:
    - impaired waters,
    - the types of practices that can address them, and
    - development of implementable projects amongst partners.
  - Assign tasks, follow up with calls and meetings (virtual or in-person)
  - Stay in contact with State (Greg and me) with questions

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Stakeholder Engagement
DIY (organizational) v. Contractor-led

- Plans are most often started as singular “get this project done” plan versus more strategic and watershed solutions oriented “strategic planning”.
  - Let’s bring these together.
- NPS-ISs developed by or for a single entity for a singular project are not ideal. But they can often be the jump-start local stakeholders need to work together.
- There should be an expressed description in the NPS-IS on what type of stakeholder involvement exists and will continue in order to keep this NPS-IS “alive”.
- Contractors will not keep NPS-ISs alive past contractual arrangements. The NPS-IS sponsoring organization should plan for regular maintenance, planting and harvesting of NPS-ISs once initial version (1.0) is approved.

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NPS-IS Team

Stakeholder involvement is, without a doubt, one of the most important steps to developing useful and enduring NPS-ISs.

- Stakeholders are often hard to find.
- Some important stakeholders don’t want to be stakeholders.
- Outreach is critical for community buy-in and for project development.
- Technical capacity is critical for SWCD-led projects with row-crop land managers and owners.
- Community buy-in is critical.

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Stakeholder Involvement Examples

1.3 Public Participation and Involvement:

This plan was created with the input of members of the community, local officials, state and local agencies, including:

- Anton Bell, Kline County Soil & Water Conservation District
- Carmen Donaldson, City of Edgerton Engineer
- Franklin Garrett, Hartville Township
- Ida Jump, Kline County Stormwater Management Department
- Lois Miller, Kline County Planning & Community Development
- Nevin Oppenheim, Parsons Township
- Quincy Rose, Shasta Township
- Thomas Urich, Kline Metroparks
- Veronica Wilson, Kline County Engineer
- Xavier Young, Zenith River Watershed Partners

VAUGE

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Stakeholder Example

- Several partners have been working in the Federal Run-St. Gloria's River watershed to improve water quality and increase ecological restoration.
- These partners focus on a diverse set of interests, from access to green space to reducing nutrient loading in Lake Erie.
- Some of the key partners working in the Yankee Run-St. Mary's River WAU include:
  - Mercer SWCD, Van Wert SWCD, Mercer County Community and Economic Development, the Mercer County Health Department, the Mercer County Engineer's Office and Mercer County Farm Bureau.
- Meetings held to discuss the development of this NPS-IS plan included the following:
  - Representatives of *the consulting firm* and Ohio EPA met with Mercer, and Van Wert SWCDs on May 8, 2019 to kick-off the development of three NPS-IS plans (including this plan); and to tour the watershed.
  - Mercer SWCD conducted a public stakeholder meeting on June 27, 2019 in Rockford, Ohio (Figure 3). The meeting covered four WAUs, including Yankee Run-St. Mary's River. Due to the wet spring, planting was delayed until June; thus, only a few farmers were able to attend. Mercer SWCD staff discussed NPS-IS plan development and agricultural BMP opportunities with the attendees.
  - Mercer SWCD conducted four meetings with individual farmers to discuss specific project ideas.

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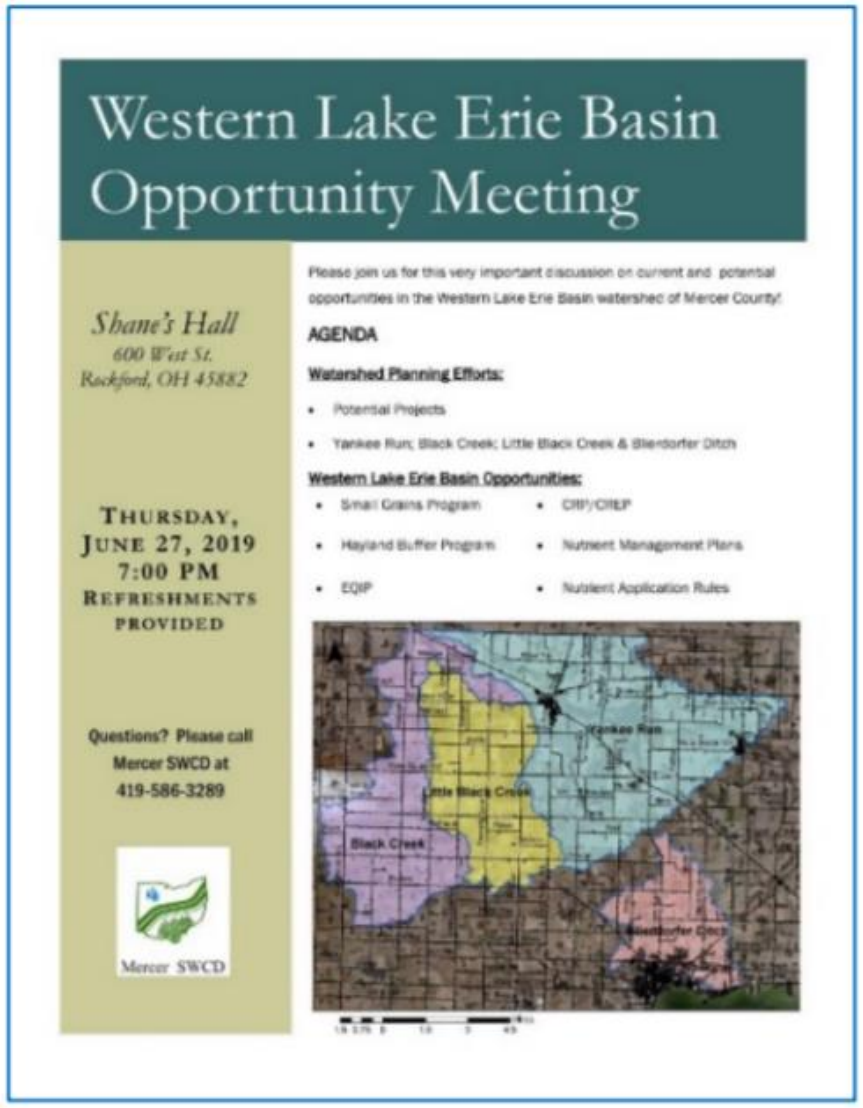
Another Stakeholder Example

- Chapters 1, 2 and 3 of this NPS-IS were primarily prepared using the Biological and Water Quality Study of the St. Marys River and Tributaries, 2015, Technical Report and the 2018 Ohio Integrated Report.
- **Project information for Chapter 4 was compiled by collaborative meetings with organizational stakeholders, community partners and local landowners.**



Stakeholder outreach in Mercer County

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Last Stakeholder Example

- In 2017, The TCWP reinvigorated the discussions with the "planning partnership" with a specific goal in mind. …develop a 9-Element NPS-IS. **This is a guiding document that will allow local entities to effectively propose and implement projects**.
  - Including Representatives from Boston Heights, Macedonia, and Hudson—along with Summit Soil & Water Conservation District, Summit Metroparks, and Western Reserve Land Conservancy.
- Input from various watershed partners has helped us to establish critical areas and projects that will help bring these areas into attainment.
  - TCWP utilized discussions with some core "planning partnership" representatives, the NEORSD Staff, and West Creek Cons.
  - 2018 Mayor's Breakfast: In attendance included mayors, city managers, stormwater representatives, and engineers from the watershed communities.
  - Information on critical areas, issues in the watershed, and potential projects were confirmed and/or provided at this meeting.
- As the 9-Element Plan is intended to be a working document, we will continue to work with our partners in the watershed to update the document and add additional projects that will help us reach our attainment goals and objectives.

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Critical (Source) Areas-Why are they important?

"Implementing BMPs and other complementary measures in critical source areas is a key part of meeting targets set by TMDLs, which ultimately lead to achieving water quality and quantity goals and objectives, including the restoration and protection of designated beneficial uses of waters of the U.S."

CRITICAL SOURCE AREA IDENTIFICATION AND BMP SELECTION: SUPPLEMENT TO WATERSHED PLANNING HANDBOOK
https://epa.ohio.gov/Portals/35/nps/319docs/CSA-BMP-Handbook-9-Element.pdf

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Critical (Source) Areas

Describe Connections:

- Delineate the contributing area to surface water.
- Identify and characterize potential sources;
  - progressing from a broad assessment of landuse/land-cover; to
  - a detailed characterization of potential specific sources, *including sources within the transport system*.
- Characterize pollutant transport pathways.
- Narrow the identification of potential sources to a set of potential critical sources.

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Figure 1. Process overview for identifying critical source areas and BMP opportunities.

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Critical Areas-more

- Is there such thing as Critical Areas in upstream HUC-12s?

Yes.

- Suggest cross-referencing Critical Areas between adjacent upstream/downstream HUCs. (Example is sedimentation or nutrient load causes of impairment)
- Can be used to implement projects to solve both nearfield and downstream impairment (i.e., far-field load reduction goals)

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More questions on Critical (Source)Areas

"Please provide example(s) of source-based critical areas to solve common cause(s). That are not geographically or political boundary based."

"Think of them as Critical Issues?—Maybe setting up critical areas in alignment with the strategies identified in the Ohio NPS Management Plan Update?"

Yes. Examples include sections from Ohio NPS Management Plan:

- Urban Sediment and Nutrient Reduction Strategies
- Agricultural Nonpoint Source Reduction Strategies
- Altered Stream and Habitat Restoration Strategies (dams, channelization)
- High Quality Waters Protection Strategies (e.g., Riparian areas)
- Other NPS Sources of Impairment (AMD, HSTS)

*Critical (Source) Areas within each of the source categories can be can further be refined and prioritized.

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Critical Areas continued

High Quality Stream protection: Can you provide guidance on incorporating protection of high-quality areas into critical areas?

- Identify why it's high quality (what's working in the landscape?)
- Are trends going the wrong direction? (More development?, loss of riparian corridor).
- Critical Area may be delineated by areas (e.g., riparian corridor) where what's working is threatened or is missing.

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Far-Field Load reduction goals for Lake Erie and Gulf Hypoxia

- Great Lakes Water Quality Agreement (GLWQA) Annex 4 goals:
  - Achieve a 40 percent total spring load reduction in total and dissolved reactive phosphorus (TP and DRP) entering Lake Erie's western basin from the Maumee, Portage, Toussaint, and Sandusky rivers by the year 2025.
  - Achieve a 40 percent total annual load reduction in the amount of total phosphorus entering Lake Erie's central basin by the year 2025.

- Mississippi River/Gulf of Mexico Watershed Nutrient Task Force:
  - In 2015, the task force agreed on an interim target of a 20 percent reduction in the amount of nitrogen flowing into the Gulf of Mexico by 2025.

Objective Setting continued

"Please provide clearer guidance."

Objectives are a listing of the implementable conservation practices needed to achieve water quality goals.

- For Load (load reduction estimates X implementation activity) can help guide the "how many and how much implementation" questions
- For Water quality thresholds, a step-wise approach identifying what can reasonably implemented is advised. Including discussion on Interim Milestones may be appropriate

Objectives must be quantifiable:

- Ties in 9-element items: (c) implementation measures, (b) their benefits, and (h) milestones.
- The Goals and/or Objectives must include a quantifiable output of what is needed to address the NPS impairment

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Objectives and Adaptive Management

"We don't really know what level of conservation practice implementation will get us to our goal."

Example:

"As these objectives are implemented, water quality monitoring (at both projects related and regularly scheduled watershed monitoring) will be conducted to determine progress toward meeting the identified goals (i.e., water quality standards). Where appropriate. these objectives will be reevaluated to determine modify objective to adjust implementation quantities and/or to add new or remove objectives."

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Goals Development

- NPS-IS Goals: “The overall nonpoint source restoration goals are to improve IBI, MIwb, ICI and QHEI scores so that the partial and/or non-attainment sites can achieve full attainment of the Aquatic Life Use designation for that respective water body.”
- Loading Goals: Numeric Water Quality annual loading targets (e.g., far-field WLEB).
- Others: Public Drinking Water Supply standards for algae toxins, pesticides and nitrate.
- Bacteria? Not tried yet.
- Can interim goals and Non-WQ goals be included and why?
  - Case specific, work with state on acceptable way forward.

“Old” versus “new” data and Non-Existent data

- No such thing as old or new. OEPA must make decisions on most recent available data. If there is something new since then, or there is a sub-watershed or potential site where data doesn’t exist, we can work with that.
- Interim goals (not associated with meeting Ohio WQS threshold metrics) but that are tied to Water quality metric goals …perhaps at a potential project site.
- So the question is really “Is the data relevant?” Most recent is relevant for State of Ohio listing/delisting and regulatory purposes.
- Data comes in all forms. Photos, local observation and data. Work with state to include best and most useful data to support efforts to solve obvious problems.

Project Summary Sheet FAQs

- The project summary sheets are helpful for making projects grant-ready; however, simplifying the format and making additional tools readily available would be helpful to watershed groups.
- It would be helpful to have more clear guidance about the level of specificity required for project summary sheets (e.g. degree of budget breakdown, degree of project concept developed, etc.). How much change is acceptable before a new PSS must be submitted and approved?
- How much information does a project need?

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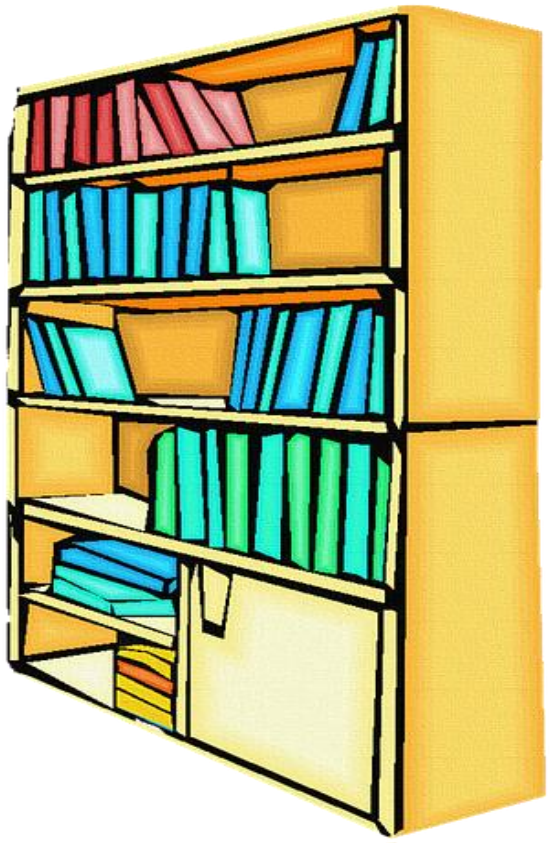
Project Summary Sheets

- The end-products
- The bookshelf of ready-to-go projects.
- Suggest keeping track of all NPS-Implementation (not just funded projects). More to come with update guidance.



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Project Summary Sheets

Critical Area 1: Project 1		
9- Element Criteria	Information Needed	Explanation
n/a	Title	*Provide a title for the project. Preferably 75 characters or less.*
criterion d	Project Lead Organization and Partners	*Provide the primary organization responsible for the project and any significant partnering organizations.*
criterion c	HUC-12 & Critical Area	*Provide the HUC 12 code and name, as well as the identifying name/number of the Critical Area where your project is located.*
criterion c	Project Location	*Provide your project's physical address or as much as possible. If there isn't an actual address, please use a mapping program (i.e. Google Maps) to get the closest address or provide the latitude/longitude of your project's location and access points.*
n/a	Which strategy is being addressed by this project?	*Provide the NPS reduction, restoration or protection strategy from* Ohio's Nonpoint Source Management Plan (Update) *that will be addressed by this project.*

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Project Summary Sheets

Critical Area 1: Project 1		
9- Element Criteria	Information Needed	Explanation
criterion f	Time Frame	*Provide the expected date and/or term for implementation of this project (i.e. Short-Term (Priority) (1-3 yr); Medium Term (3-7 yrs); Long Term (7+ yrs); Ongoing (annual events)). Any Short-Term project should have a completed Project Summary Sheet*
criterion g	Short Description	*Provide a concise synopsis. Include pertinent details like a location description, issues addressed, and/or restoration activities. Preferably 250 characters or less.*
criterion g	Project Narrative	*Provide a more detailed synopsis explaining the project to partners, funders and the public. Include information like who is involved, what are the detailed goals and methods, where is will be done and how it will result in progress toward restoration of the impairment. Use numeric or measurable values when possible (i.e. 1500' of bank stabilization, 15 drainage water management structures). Preferably 2,500 characters or less.*
criterion d	Estimated Total Cost	*Provide a total of all expected expenses necessary to conduct your project. If possible, provide a breakdown by Personnel/Fringe, Travel, Equipment/Supplies, and Sub-contractual. List any sources of cash or in-kind match and the amount, if they have been identified and/or committed. Also, where applicable, include an estimated cost per unit for BMPs. (can add to an appendix section or as a table below the PSS Table)*

Project Summary Sheets

Critical Area 1: Project 1		
9- Element Criteria	Information Needed	Explanation
criterion d	Possible Funding Source	*Provide a list of possible funding sources for your project.*
criterion a	Identified Causes and Sources	*Provide a list of the identified Cause(s) and associated Source(s) that your project will address. These should reflect those listed for the critical area you are working in.*
criteria b & h	**Part 1: How much improvement is needed to remove the NPS impairment associated with this Critical Area?**	***This should be based on Water Quality Standards such as those in the Goals and Objectives of Chapter 3 subsection 3.2.4. I.e., biological targets: IBI scores need to be improved by 5 points to meet WQS; load reductions: annual phosphorus loading needs to be reduced by 2,000 lbs. from baseline.***
	Part 2: How much of the needed improvement for the whole Critical Area is estimated to be accomplished by this project?	***Provide the amount of measured improvement expected for each of the biological and/or chemical impairments.*** ***Provide progress toward list of quantifiable objective for the Critical Area. BMP tracking is useful where multiple projects have been implemented.***
	Part 3: Load reduced?	***Estimate of reduction in pollutants (e.g., Tons sediment/yr., #P/yr., #N/yr.)***
criterion i	How will the effectiveness of this project in addressing the NPS impairment be measured?	*Provide an explanation of how you or your partners intend to measure the improvement. (i.e. Ohio EPA 319 staff will conduct biological criteria sampling, ABC University will measure changes in flow). **Mention other monitoring efforts that exist or are planned for this HUC-12 or site.***
criterion e	Information and Education	*Provide a brief quantifiable description of how information about this project will be shared. E.g., hold 2 workshops, develop 1 press release, Field Days, etc.*

Project Summary Sheet: Add-ons

- It’s alright to further demonstrate project preparedness by adding onto the PSS sheets.
  - Concept Plans
  - Budget Breakdown
  - Photos

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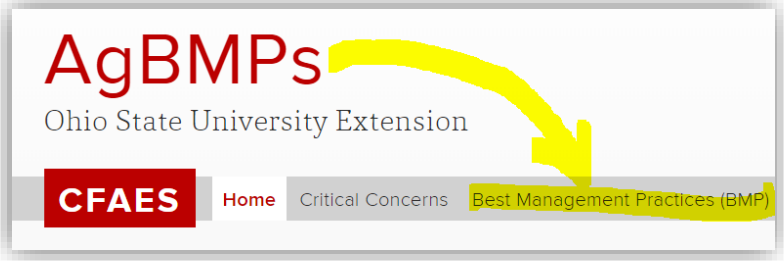
Load Reduction Estimates

Load reduction isn't always listed as a "goal" to solve impairment various critical areas. What are some tools/worksheets to available to aid in determine load reductions required under item b&h in the project summary sheets?



https://agbmps.osu.edu/bmp

STEPL Version 4.4 User Training Webinar

https://register.gotowebinar.com/register/5922386751822104076

Wed, Oct 7, 2020 1:00 PM - 2:30 PM EDT

Show in My Time Zone

STEPL is an EPA model based on a customized Excel spreadsheet that supports planning level decision-making for watersheds. It is designed to help determining annual average pollutant loadings from nonpoint sources and estimate best management practice (BMP) effectiveness at reducing pollutant loads. It was originally developed to assist State nonpoint source project managers in reporting load reductions to EPA, but it is also used by other federal, state, local partners, and consultants for watershed planning.

- Region 5 model spreadsheet is still useful for urban and stream bank restoration and gully erosion.
- **Cost Benefit Synthesis of Best Management Practices to Address Nutrients and Sediment in Ohio, December 2019. (The Nature Conservancy)**

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Addressing Point Sources in the Nonpoint Source Implementation Strategies

- Permitting programs NPDES (Municipal, Industrial, Storm Water, Biosolids, CAFOs, more). There's a map for that.
- In addition to NPS impairment, many Watershed Assessment Units are impaired by Point Sources as well.
- Suggest a list be provided of Point Sources in the HUC-12 in the watershed profile section and describe briefly describe if and how they contribute to impairment.
  - Also suggest livestock inventory to be included so BMPs can be focused and prioritized accordingly

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Can’t figure it out? Contact us.

- Unique situations often come up. We are happy to talk through difficulties.
- New authors or NPS-IS authoring group are encouraged to contact us so we can help you get started.
- We can help with early-on by providing suggestions, pointing toward data and other resources, and by providing candid review comments.

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NPS-IS Updates

Future updates to approved plans- it's important to establish some parameters for what that ideally should look like:

- level of preferred plan author/stakeholder coordination relative to the significance of the proposed updates?; and
- Ohio EPA/ODA's role in coordination and review.

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NPS-IS Updates - DRAFT Guidance on Process

These generally occur when an entity within the HUC-12 WAU wants to add a project to an existing NPS-IS Plan.

1) Entity should review existing plan and contact plan authors to discuss and agree upon adding to, or updating the NPS-IS.
2) Make sure project fits within existing Critical Area(s) and Objectives (found in Section 3)
   - If it does, a project summary sheet should be developed.
   - If it does not, the authoring stakeholder group should work with entity to update Critical Areas and Objectives (if appropriate), while also revisiting the project overview table(Section 4) and current data availability. AND provide a new project summary sheet.
3) It is suggested that the original authoring entity should submit the draft NPS-IS Update to the state. The review process after that is identical as that for New NPS-ISs.

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Updates relative to RFP timing

What timing do the agencies want in terms of sending plan updates in advance of Section 319 applications?

Should updates be sent in tandem w/ grant applications or do they need to be submitted beforehand?

How far in advance?

- Updates should be developed as projects are developed and sent in anytime during the year.
- Waiting until an RFP comes out to develop a project, update the NPS-IS, and providing a new requisite Project Summary Sheet is not recommended.
- Timing-wise: §319 project funding selections process does not necessarily wait for NPS-IS approval.
- Points are lost during review if project is not currently in an approved NPS-IS.

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Pro Tips

Discussion of Tools and Resources

Agricultural BMPs and producer buy-in and data availability

- Agricultural BMP projects: How much buy-in from private landowners is needed/expected in order to put forth a project?
- Is there easy access to ODA data, including H2Ohio-funded practices, permitted operations within a WAU?
  - ODA's SWIMs inquiries? USDA-NRCS? Local SWCD files/local knowledge

Enormous opportunities to install and implement conservation on the landscape.

Buy-in is critical early on through local outreach (e.g., SWCD technicians, and OSU extension) and support from local and state commodity groups.

The ACPF is a terrific tool that helps identify conservation opportunities (especially water retention, treatment, and management opportunities)

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Agricultural BMPs and producer buy-in and data availability (continued)

Ideal situation PSSs for Ag BMPs	Marginal PSSs for Ag BMP
Targeted outreach to land-owners/managers.	No outreach, no specific buy-in
Participants have been identified. SWCD has identified 6 producers who have agreed…"	No specific as to who may participate, or who's on-board. "SWCD will work with"
ACPF usage	Laundry list of BMPs without locations
Practices already surveyed/designed	No mention of design, or mention of existing capacity within organization to move if funding occurs
Budget already determined.	Multiple Summary Sheets: each for a different practice:
One summary sheet	"This project summary sheet may be combined…"

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Project Summary Sheet- B&H tips

b	**Determine load reductions needed.** *Determine measurable improvements needed to meet WQS—(biological, physical) and/or load reductions (pollutant).*
h	Identify indicators to measure progress *Identify indicators to measure progress (e.g., WQS indices (biological, physical) and/or load reductions (chemical)) and how they will be measured*

criteria b& h	**Part 1: How much improvement is needed to remove the NPS impairment for the whole Critical Area?** **Based on current WQ metrics in project area or critical area (how many points from goal value?); or Load reduction goal to reach target. *I.e., biological targets: IBI scores need to be improved by 5 points to meet WQS; load reductions: annual phosphorus loading needs to be reduced by 2,000 lbs. from baseline.***
	Part 2: How much of the needed improvement for the whole Critical Area is estimated to be accomplished by this project? ***Provide the amount of measured improvement expected for each of the biological and/or chemical impairments.*** ***Provide progress toward list of quantifiable objective for the Critical Area.*** ***BMP tracking is useful where multiple projects have been implemented.***
	Part 3: Load Reduced? A must for every project summary sheet (required by U.S. EPA)

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Appendices

Does the state want to receive documentation of the calculations used to achieve objectives targets?

What is the best way to share these? (As an appendix to the plan)?

Appendices may be included with the NPS-IS review. We recommend ancillary information be included in an Appendices Section, within the same document.

Such a section could include additional valuable information (like calculations) to new stakeholders, authors, and/or technical staff.

*Also can attach pictures or conceptual design images, and budget calculations to Project Summary Sheets

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Funding eligibility and Funding organization priorities

Please discuss §319 priorities or anticipated priorities for current and future funding years.

Some of the practices (i.e., cover crops) are not a priority for §319 funding, but SWCDs want to focus some efforts on those.

- Recent §319 RFPs from Ohio EPA have prioritized funding for structural conservation practices over ephemeral conservation practices. Other USDA and State of Ohio programs also fund cover crops.
- Projects that have high probability to achieve water quality goals when implemented.
- Innovative water retention and treatment systems in both agricultural, and urban landscape.
- Wetlands, riparian corridor and stream restoration.
- Dam removal

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Do all projects we have need Project Summary sheets?

What if projects are not fundable through 319, (i.e. HSTS projects, cover crops, etc.)?

Project Summary Sheets are not required for projects that are not eligible for U.S. EPA-sourced funding; however:

- Consider how this level of planning can be used to demonstrate to other funding sources that there is an in-motion strategic plan developed to accomplish a variety of conservation practices using a variety of sources of funding to realize mutual and/or closely aligned water quality goals amongst funding institutions.

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Discussion on waters of the State and Attainment of Beneficial Uses (4 types).

Beneficial uses are “designated” in Ohio’s Water Quality Standards

- Recreation- Causes of impairment include Bacteria, Algae (Lake Erie only)
- Water Supply (specifically Public Drinking Water Supply)- Causes of impairment include Nitrates, Algae and Pesticides
- Aquatic Life- Many, many potential causes of impairment — with a subset of those causes commonly associated with Nonpoint Sources
- Fish Tissue- Legacy Point Source related impairment

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Tools and Resources

319 Grants | NPS Management Plan | Approved 9-Element NPS-ISs | 9-Element NPS-IS Development Tools | TMDL program NPS-IS Resources

GLRI Grants | SWIF Grants | Monitoring Reports | For Additional Information | Documents

Nine-Element Nonpoint Source Implementation Strategies (9-Element NPS-IS) in Ohio

The 9-Element NPS-IS is a strategic plan that provides assurance to nonpoint source grant programs and institutions (i.e., U.S. EPA) that, as described, a proposed water quality project meets the 9 Essential Elements per U.S. EPA §319 Program Guidance (April 2013).

For a project to be eligible for Ohio EPA Section 319 Funding, a proposed project must be described in a U.S. EPA-approved 9-Element NPS-IS for the HUC-12 watershed in which the project is located.

The NPS-IS ensures that potentially funded projects are: rooted in the best science available; located in areas that will address the worst problems; and that have the administrative, evaluation, and educational components needed to ensure that the water resource will achieve as much long term benefit as possible.

The NPS-IS is a living strategic planning document that summarizes causes and sources of impairment, established critical areas, identifies quantifiable objectives to address causes and sources of impairment, and describes projects designed to meet those objectives.

Each NPS-IS is unique at the HUC-12 Watershed Assessment Unit (WAU) scale. The NPS-IS is designed to evolve as projects come and go. Likewise, every updated version (containing new projects, new data, and or changes to critical areas, goals and objectives) must be reviewed and approved by Ohio EPA.

- **NEW!** Useful Maps and GIS data layers to aid in development and updates of NPS-ISs
- FINAL Template with Descriptions for Ohio's Nonpoint Source Pollution Implementation Strategies (NPS-IS), 7/25/16 [PDF] [DOCX]
- Guide to Developing Nine-Element Nonpoint Source Implementation Strategic Plans in Ohio, 8/30/16 (This guidance is under review, September 2020)
- Critical Source Area Identification and BMP Selection: Supplement to Watershed Planning Handbook
- Historical References — Watershed Action Plans
  These references are provided because the information included in them may be useful when developing 9-Element Nonpoint Source Implementation Strategies and are not to be considered as equivalent to approved 9-Element Strategic Implementation Plans

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9-Element NPS-IS Development Tools

- **NEW!** Useful Maps and GIS data layers to aid in development and updates of NPS-ISs
- FINAL Template with Descriptions for Ohio's Nonpoint Source Pollution Implementation Strategies (NPS-IS), 7/25/16 [PDF] [DOCX]
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- Historical References — Watershed Action Plans
  These references are provided because the information included in them may be useful when developing 9-Element Nonpoint Source Implementation Strategies and are not to be considered as equivalent to approved 9-Element Strategic Implementation Plans
- Interactive Map of 9-Element Plans in Ohio

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Integrated Water Quality Report (2020)

The 2020 Integrated Water Quality Monitoring and Assessment Report indicates the general condition of

Explore

Nonpoint Source Implementation Strategies

Public map showing the approved nonpoint source implementation strategies for Ohio watersheds. A

Explore

Surface Water Quality and Hydrologic Units (HUCs)

Water Quality sampling locations, aquatic life use designations, and Hydrologic Units in Ohio

Explore

NPDES General Storm Water Permits

Location and details of Industrial and Construction storm water permits and Ohio-Regulated MS4

Explore

NPDES Individual Permits

Individual NPDES Permits for permitted waste water treatment plants. Attributes include facility

Explore

NPDES Permits for Concentrated Animal

Concentrated animal feeding operations in the state of Ohio that have individual NPDES permits to

Explore

Stream and Wetland Mitigation

Web mapping application used to identify prioritized stream and wetland mitigation opportunities in

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Biosolids Application Sites

Authorized beneficial use sites for Class B Biosolids. Class B biosolids are generated by non-industrial

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Data Layers - Open Data Site: https://data-oepa.opendata.arcgis.com/

Explore the map service layers in your own web maps or in ArcMap or ArcGIS Pro.

Use the link to download datasets as shapefiles or csv.

National Land Cover 2016 CONUS (WMS)

The U.S. Geological Survey (USGS), in partnership with several federal agencies, has developed and

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National Wetlands Inventory - Wetlands (Map

The present goal of the Service is to provide the citizens of the United States and its Trust Territories with

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Cities and Villages

Cities and Villages in Ohio

Explore

ODNR Lands (includes State Parks)

ODNR Lands (includes State Parks (includes State Parks)

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Aquatic Life Use Monitoring (2020)

Assessment and monitoring results for aquatic life beneficial water use as reported in the 2020 Integrated Water Quality Monitoring and

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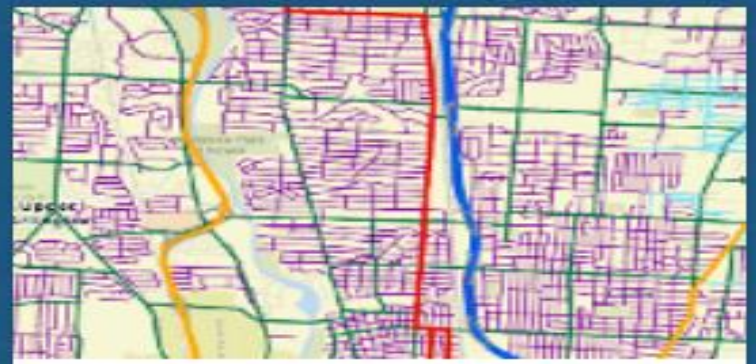

Ohio Roads

Road Inventory for Ohio. Ohio Department of Transportation

Explore

Townships

Ohio Townships

Explore

TMDL Program NPS-IS Resources

Total Maximum Daily Load Report - Total Maximum Daily Loads (TMDLs) are developed as a tool to help restore and protect waterbodies where beneficial uses are impaired or threatened for aquatic life, recreation, public drinking water, or human health.

Ohio EPA Integrated Water Quality Monitoring and Assessment Report . https://epa.ohio.gov/dsw/tmdl/OhioIntegratedReport Types of information available in the IR: assessment unit attainment status, cause of impairment, TMDL status Data used to develop report available in spreadsheet on webpage or through How's My Waterway.

Summarizes data from watershed surveys into an interactive map of watershed assessment units (HUC 12s), large river assessment units and Lake Erie assessment units. The IR and interactive map are snapshots taken every two years. More recent data may be available for a watershed in a Biological and Water Quality Report (or Technical Support Document) available here: https://epa.ohio.gov/dsw/document_index/psdindx

Biological and Water Quality Reports (or Technical Support Documents) - https://epa.ohio.gov/dsw/document_index/psdindx or on the TMDL project pages.

Loading and Analysis Plans - A loading analysis plan (LAP) is a plan prepared by Ohio EPA that lists actions to be taken by the Agency for sampling sites found to be impaired for a beneficial use designation (aquatic life, recreation and public water supply).

Links to an example LAP and Fact Sheet from the Lower Scioto River TMDL page:
—Loading Analysis Plan and Supporting Data Acquisition Needed for the Lower Scioto River and Selected Tributaries. Report, Fact Sheet

How's My Waterway - U.S. EPA's new tool provides water quality information at the community, state and national level. Ohio's water quality information from the final 2020 Integrated Water Quality Monitoring and Assessment Report is included along with permitted discharger, drinking water and nonpoint source program grant project information on a 12-HUC watershed assessment unit (WAU) scale. Available at: https://www.epa.gov/waterdata/hows-my-waterway.

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TMDL Resources: When are they updated?

- Receive notification of when TMDL project documents are available for stakeholder review and comment
  - Includes: Study Plan, Biological and Water Quality Report, Loading Analysis Plan, Preliminary Modeling Results and Draft TMDL
- Sign up!
  - http://ohioepa.custhelp.com/ci/documents/detail/2/subscriptionpage

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Habitat Data

Upper Hog Creek HUC-12 (04100007 03 01)																																			
Key QHEI Components			WWH Attributes											MWH Attributes																						
														High Influence						Moderate Influence																
River Mile	QHEI Score	Gradient (ft/mi)	Not Channelized or Recovered	Boulder/Cobble/Gravel Substrate	Silt Free Substrates	Good/Excellent Development	Moderate/High Sinuosity	Extensive/Moderate Cover	Fast Current/Eddies	Low/Normal Embeddedness	Max Depth >40 cm	Low/Normal Embeddedness	WWH Attributes	Channelized/No Recovery	Silt/Muck Substrates	No Sinuosity	Sparse/No Cover	Max Depth <40 cm	High Influence Modified Attributes	Recovering Channel	Heavy/Moderate Silt Cover	Sand Substrate (Boat)	Hardpan Substrate Origin	Fair/Poor Development	Low Sinuosity	Only 1 or 2 Cover Types	Intermediate/Poor Pools	No Fast Current	High/Moderate Embeddedness	High/Moderate Riffle Embeddedness	No Riffle	Moderate Influence MWM Attributes				
Hog Creek (MWH)																																			
13.4	20.0	2.42											0	•	•	•	•	•	5		•			•				•	•		•	5				
Unnamed Tributary to Hog Creek at RM 13.71 (MWH Recommended)																																			
0.5	20.0	1.89											0	•	•	•	•	•	5		•			•				•	•		•	5				
Lord Ditch (MWH Recommended)																																			
0.2	36.0	3.76		•				•					2	•		•	•	•	4		•			•				•	•		•	5				

- Where to find? ***Appendix F*** of watershed Technical Support Documents:
  - https://epa.ohio.gov/Portals/35/tmdl/TSD/SORT%202016/SORT%20Appendices.pdf

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Watershed Assessment Units

- HUC-12 watershed scale assessment units (area)
- Large River Assessment Units (segments)

05060001 90 01	Scioto River Mainstem (L. Scioto R. to Olentangy R.); excluding O'Shaughnessy and Griggs reservoirs
05060001 90 02	Scioto River Mainstem (Olentangy River to Big Darby Creek)
05060002 90 01	Scioto River Mainstem (Big Darby Creek to Paint Creek)
05060002 90 02	Scioto River Mainstem (Paint Creek to Sunfish Creek)
05060002 90 03	Scioto River Mainstem (Sunfish Creek to Ohio River)
https://epa.ohio.gov/Portals/35/tmdl/2020intreport/2020_SectionG.pdf https://geo.epa.ohio.gov/portal/apps/webappviewer/index.html?id=79c3595f371e4324b82b0e5a9f96fc15	

- Lake Erie Assessment Units (areas)

041202000101	Lake Erie Islands Shoreline (<=3m)
041202000201	Lake Erie Western Basin Shoreline (<=3m)
041202000202	Lake Erie Sandusky Basin Shoreline (<=3m)
041202000203	Lake Erie Central Basin Shoreline (<=3m)
041202000301	Lake Erie Western Basin Open Water (>3m)
041202000302	Lake Erie Sandusky Basin Open Water (>3m)
041202000303	Lake Erie Central Basin Open Water (>3m)

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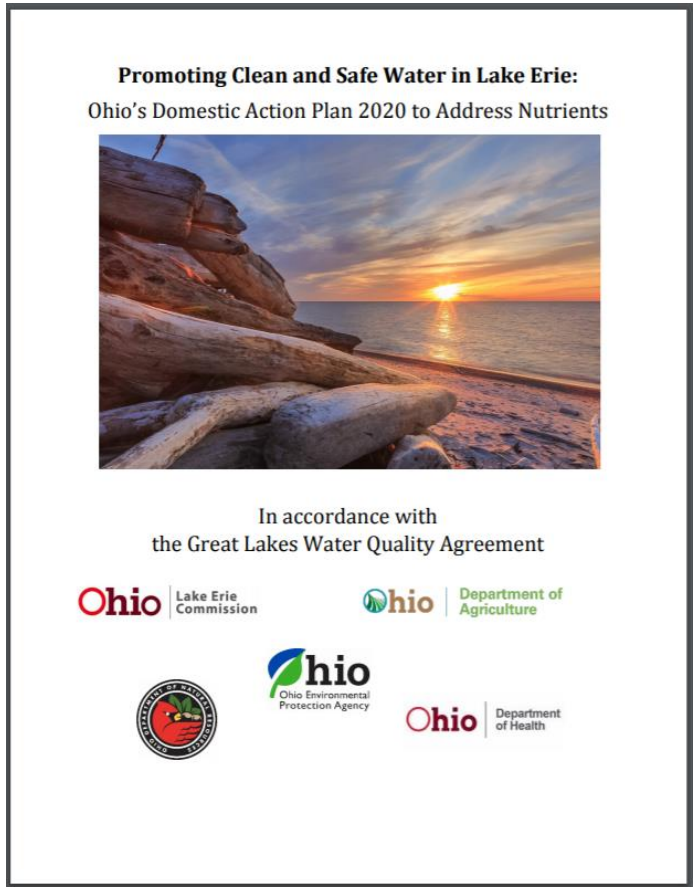
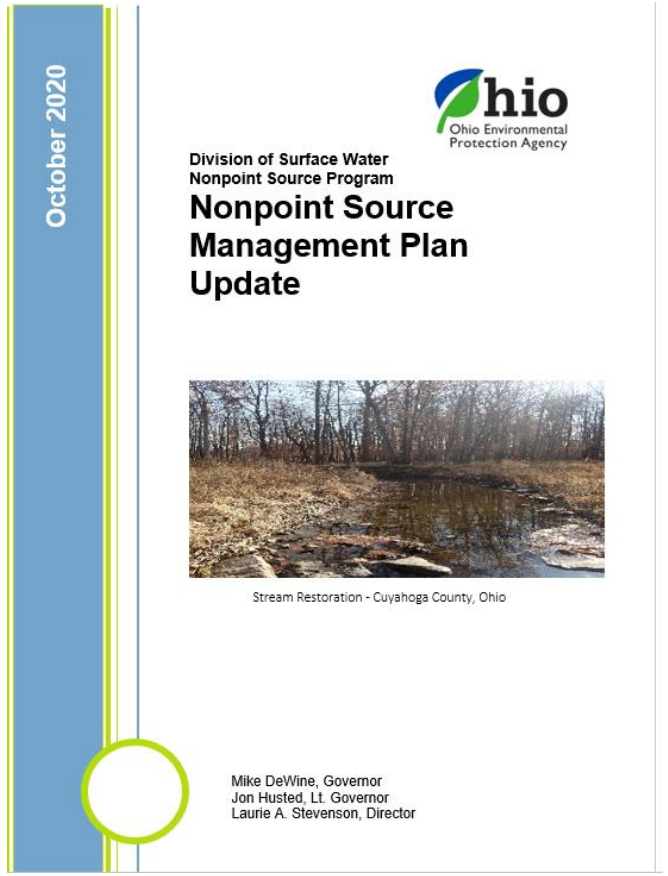
Ohio's Domestic Action Plan 2.0
Ohio's NPS Program Management Plan



Coming Soon! →



https://lakeerie.ohio.gov/LakeEriePlanning/OhioDomesticActionPlan2018.aspx

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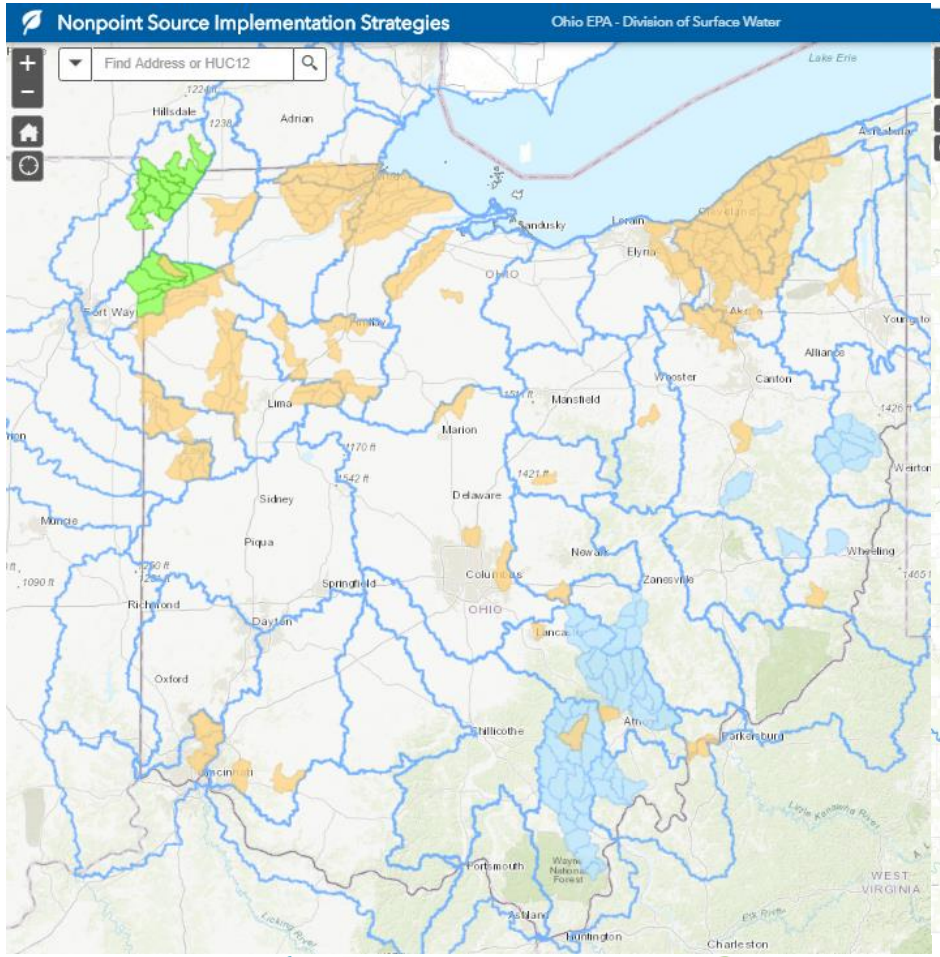
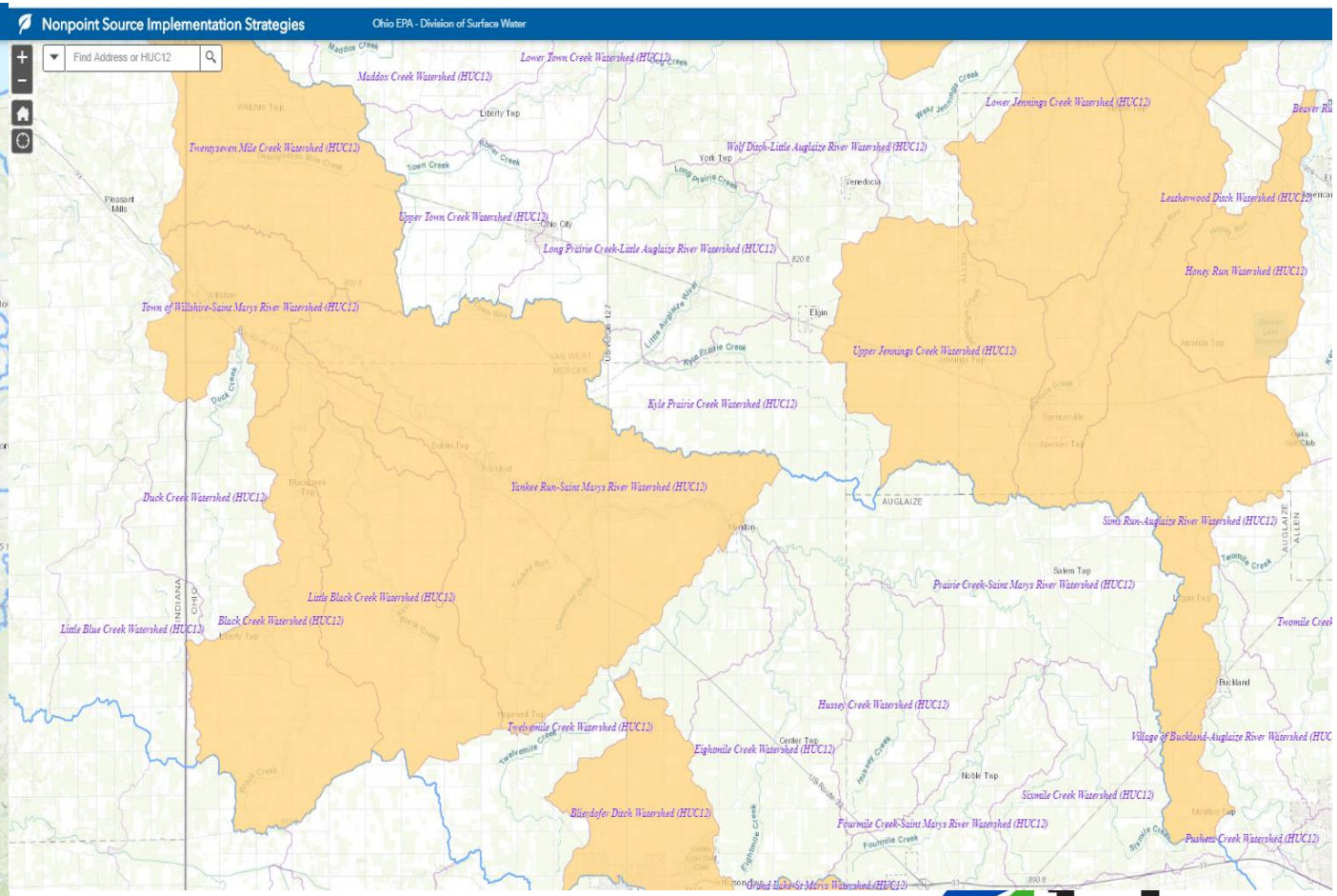
NPS-IS Interactive Map





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Thank You.
Questions?

Contact Rick Wilson: rick.wilson@epa.ohio.gov
And Greg Nageotte: Greg.Nageotte@agri.ohio.gov

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